



Louisiana's Business Roundtable

DRAFT – FOR DISCUSSION ONLY

February 26, 2024

The Honorable Janet L. Yellen
U.S. Secretary of the Treasury
The Honorable Daniel Werfel
Internal Revenue Service
CC:PA:LPD:PR (REG-117631-23)
Room 5203, P.O. Box 7604
Ben Franklin Station
Washington DC 20044

Re: Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election To Treat Clean Hydrogen Production Facilities as Energy Property (REG-117631-23)

Secretary Yellen and Commissioner Werfel,

On behalf of the Committee of 100 for Economic Development (C100), we thank you for the chance to comment on the proposed rule for 45V relating to the credit for production of clean hydrogen and express concerns about the credit as proposed. C100 is the Louisiana's primary business roundtable, and a nonpartisan advocate for developing an energy sector in the US that embraces its low-carbon future. Louisiana was awarded the US Economic Development Administration's Build Back Better grant for its "H2TheFuture" application, focused on industrial decarbonization and developing an energy transition based around hydrogen, as well as the most recent award of the NSF Engines grant for LSU, and the GLOW Propeller award, adding up to \$1.47 billion in federal grants focusing on Louisiana's clean energy and clean hydrogen future. ***To be clear: These credit rules are critical to realizing the potential of those existing federal investments in Louisiana and for the US environment.***

We believe in the potential benefits for Louisiana's and the US economy, if done thoughtfully. We worry that the rules could unintentionally lead to consequences that are detrimental to the

nation's goals, and our state's role in this future. The nation's clean hydrogen ecosystem is central to the future of Louisiana's economy, and critical to looking forward to our state's energy workforce. Louisiana has billions of planned projects in blue and green hydrogen



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production considering investments across the state, because of our workforce and geographic advantages for the US. But we believe that could all be in jeopardy, depending on many details of the rules of the 45V credit.

Because of the scale and impact of billions in planned clean hydrogen projects in Louisiana's industrial landscape, we urge the IRS to reconsider aspects of these proposed regulations and ensure that they align with the congressional intent of the Inflation Reduction Act. These regulations could make or break final investment decisions in our region and unlock our clean hydrogen economy. Many of our state's prospective hydrogen investments also are looking at neighboring states that may have more options for sourcing electricity to meet the stringent requirements, including a larger region that provides more diverse, existing, renewable resource technologies from which to draw the electricity. They also are considering moving their investment dollars to non-US projects in Europe and elsewhere, where production tax incentive requirements are not so stringent.

Of particular concern are the three pillars of temporal matching, deliverability, and incrementality, as well as the decision to divide the MISO region into two parts, leaving a very small geographic footprint from which projects in Louisiana, Mississippi, Arkansas, and Texas may draw electricity (the "Delta Region").

It is critical to encourage and permit interregional transmission delivery of renewable energy between the Delta and Plains region. The existing renewable energy fleet in Oklahoma – predominately onshore wind farms – can provide sufficient power to electrolyzer technology adopted in Louisiana's high concentration of hydrogen utilizing industries, thereby supporting commercialization and nearing price parity as offshore wind and solar resources in Louisiana come online. The largest network of hydrogen delivery pipelines in the United States exists between Texas and Louisiana, and the first federal offshore wind leases are strategically postured between the two states. Additionally, planning for transmission expansion from Texas to deliver electricity to other Gulf states in the Delta region is already underway.

We respectfully request that the rules focus on ways to maximize flexibility and certainty for project developers. We are concerned that permitting challenges will create delays in building out transmission for new renewables and related infrastructure to meet these incrementality requirements. We request that an existing fossil fuel electricity generating facility that is upgraded with carbon capture and sequestration and dedicated to clean hydrogen supply be allowed to meet the incrementality requirement for EACs.

We have concern with the temporality requirements. Hourly temporal matching poses significant technological challenges, and we suggest that Treasury consider annual matching



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extended to 2030 or annual matching if construction starts before 2032 to better support first mover projects. The U.S is not prepared to adopt hourly temporal matching requirements for renewable electricity usage.

With regard to Battery Energy Storage Systems (BESS), we feel it is important for state with a power infrastructure like Louisiana to know and understand how renewable capacity will be accounted for. It seems that the credit may be tied to when the BESS is charged by the renewable resource, rather than when the hydrogen facility needs to apply the capacity for the actual production from the plant. For a green hydrogen production facility that plans to run primarily on renewable energy, the ability to operate hourly will be jeopardized if the retail provider cannot support hourly renewable capacity (i.e., intermittent cloud coverage) and an aligned BESS program is not in place. The lack of clear guidance allowing BESS matching to occur when the energy is used to produce hydrogen hurts the economics of the project due to the lack of load stability. We would request that a rule allowing BESS matching at the time of hydrogen production.

Moreover, related to deliverability, we have strong concerns about the map. MISO is the **only** territory impacted by the regional map introduced by the DOE that has been divided into **two** regions, the Midwest Region and the Delta Region. The result is that the ability to support hourly matching in the Delta Region based on renewable capacity – one of the region's seeing the **most** clean hydrogen projects because of supply chain, geography, and workforce advantages for the US, as recognized by the US EDA's award for the H2TheFuture grant – is limited to parts of Louisiana, Arkansas, Mississippi, and Texas. Solar capacity is the only true renewable option available within the Delta layout. Four existing nuclear facilities are within the Delta region, but the incrementality requirement makes nuclear a non-viable source of energy. Virtual power purchase agreements tied to other MISO locations are unavailable, thus eliminating wind energy support from more viable locations in the Midwest or the northern part of the MISO region. Acting as a nation working together, hourly and seasonal diurnal profiles for wind projects in North Dakota or Illinois (with very different from solar profiles than the Delta MISO region) should be considered to create a more All-American renewable energy stack. ***Limiting deliverability to such a small territory unfairly restricts hydrogen production in Louisiana.***

Renewable Natural Gas (RNG) is different from the electricity market and we recommend that the three pillars for EACs should not apply the same. We request that the language be expanded to ensure all feedstock sources of RNG (e.g., livestock farms, waste treatment plants) outside of landfill-derived renewable natural gas are fully eligible to be consistent with the original intent of the 45V statute. Book-and-claim via private contracts should be allowed for RNG derived from all sources of feedstock. Existing substantiation and documentation protocols are adequate, and



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a separate requirement should not be developed under Treasury/IRS to avoid overly cumbersome processes.

We encourage a second look at the proposed “first productive use” requirement within the preamble to the regulations in order to avoid higher costs for end-consumers and the risks of greater stranded gas for existing projects, as well as added complexity. Treasury references promulgating rules that RNG must originate from the first productive use of the relevant methane, meaning that biogas from any source that had previously been productively used would receive a carbon intensity value equivalent to that for natural gas. As is the case with the additionality rule, this would mean that no existing RNG sources could be used to support the carbon intensity score of hydrogen production, putting the credit out of reach for many hydrogen producers.

On GREET factors, we request that the 45VH2-GREET operate with flexibility and be administered in a manner that maximizes the incentive to reduce greenhouse gas emissions. Currently, background data in the 45VH2-GREET model is not available for adjustment. Locking these key variables in the 45V GREET model as background data will be detrimental to the goal of reducing overall emissions and will stifle the development of clean hydrogen production. We consider the lifecycle analysis as key to moving low-carbon projects forward.

A taxpayer’s final investment decision requires confidence in project economics. The \$45V tax credits are an important value driver to moving America toward low-carbon, hydrogen sources. Please consider that the GREET should be grandfathered to reduce risk by providing taxpayers with greater certainty. Future flexibility is required to avoid punishing early-stage projects that are operating under older guidance. GREET grandfathering with future optionality is a necessary mechanism to de-risk investment decisions and to bolster long-term project viability. Existing documentation should be able to substantiate input (e.g., EPA). Once approved, the mandate to use a new model should not have to change year by year; it creates uncertainty, risk and a barrier to investment.

With regard to incrementality and existing assets, the support of *all* existing, wind, solar, and nuclear facilities is vital to building a clean hydrogen sector. Supply, construction costs, and insufficient transmission are critical to keep up with the accelerated growth needed from the renewable space. **Extending** the life of wind, solar, and nuclear plants already operating is consistent with overall environmental objectives and should be incorporated in the guidance. This could be accomplished in a number of ways, including grandfathering existing facilities, at least for a certain period of time; allowing a percentage of energy greater than the proposed five percent to be derived from existing facilities; allowing the COD date of carbon capture and sequestration (CCS) equipment to qualify as newly placed in service energy



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generation; and not subjecting facilities retrofitted with CCS to the 80-20 rule. By allowing these assets to participate in the hydrogen sector, more MWh for around-the-clock support will be available. Allowing energy from nuclear, in particular, will facilitate operations during hours when plants are less able to obtain EACs from wind and solar facilities.

Treasury has requested comments on whether the addition of CCS to existing fossil power generation resets the COD as it relates to the incrementality test. We advise Treasury should adopt this policy. Adding carbon capture to existing fossil generation meets the goals of the clean hydrogen tax credit by immediately generating more low-carbon intensity power. It is vital for Louisiana that we retrofit toward low carbon to achieve the energy transition as fast as possible for the planet. This power should be considered incremental because it was neither generated nor capable of being generated prior to the addition of CCS and results in no induced grid emissions. That's a win-win.

To that end, it's clear that there is a benefit of encouraging the retrofit of existing fossil generation sites with CCS. We request that Treasury should exclude these retrofits from the 80/20 rule. On balance, the cost of the CCS will not be at least 80 percent of the value of the updated facility. The focus should be **on the reduction in induced emissions** and not to impose an inflated threshold of cost to do so.

Another existential challenge for clean hydrogen in the proposed rules relate to the Provisional Emissions Rate and the project timing of designing clean hydrogen facilities. The proposed rule says that a taxpayer may use a Provisional Emissions Rate (PER) determined by the Secretary to calculate the amount of the clean hydrogen production credit with respect to qualified clean hydrogen produced by the taxpayer at a qualified clean hydrogen production facility until the lifecycle GHG emissions rate of such hydrogen has been determined under the most recent GREET model. The proposed timing for provisional emissions rate (PER) applications is incompatible with typical project delivery used on major capital projects. Developing capital intensive projects will typically spend significant time analyzing and selecting a specific

technology or facility design concept, often referred to as Pre-FEED (Front end engineering design). Pre-FEED completion signals the end of an optionality period, which then progresses into FEED. During FEED, final engineering is completed on the basis that design work is finalized and the project scope is frozen. Waiting until after FEED to submit the PER application will delay or

eliminate the taxpayers' ability to progress a project that aligns with standard project assurance and auditing processes. A realistic and appropriate timing for the PER application is at the completion of pre-FEED. At this time, taxpayers should have sufficient project design and cost



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information. Similar to the discussion above, PER grandfathering and future optionality to use GREET should apply to projects receiving a PER.

The final 45V rules should consider excess steam that is generated during the hydrogen production process and then used as a fuel substitute for higher emitting energy sources in other parts of our facility. The goal of the IRA is to lower overall emissions and using this excess steam helps effectuate that goal. Unfortunately, the proposed rules assume there is no excess steam generated as part of the hydrogen production process; rather, any excess steam generated is assumed to be used to power the necessary carbon capture equipment. If companies use a more efficient hydrogen production process and more efficient carbon capture equipment, the regulations should be flexible enough to allow additional emission reductions to be reflected in the final carbon intensity score of the produced hydrogen.

As the Department of Treasury commences to draft final regulations, I urge you and your staff to reconsider how the implementation of Section 45V is structured, including eliminating the three-pillar approach. The statute includes no mention, let alone requirement, of a three-pillar concept imposing onerous additionality, timing, and location rules. If Treasury insists on retaining the three pillars, the rules should be significantly modified to reflect the practicalities and challenges of complying with the rules. As noted, among those options would be allowing more time to comply with the rules, grandfathering of existing facilities, greater tolerance percentages for electricity from existing facilities, allowing acquisition of energy from outside the immediate region, facilitating the use of CCS, and allowing energy to be sourced in ways to avoid the additional costs of redundancy, including clarification of how energy storage fits into the three-pillar regime.

We appreciate the opportunity to provide comments on the proposed rule for 45V. We are pursuing the future of clean hydrogen as a great opportunity for the US economy, and doing Louisiana's part to help the nation reduce its industrial carbon footprint.

Sincerely,

A handwritten signature in black ink, appearing to read 'Adam Knapp', written over a large, faint, light gray watermark of the word 'DRAFT'.

Adam Knapp
CEO, Committee of 100 for Economic Development